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The history of recorded sound begins in verse. Thomas Edison announced his plans to mechanically reproduce the human voice in a letter to *Scientific American* published on November 17, 1877.[1] Three weeks later, Edison's associates assembled a simple device on which Edison recorded "Mary Had a Little Lamb." Whatever disagreements exist among historians as to the exact events of that day, there is no disputing that the words of this nursery rhyme were among the first spoken by the phonograph.[2] Their fame makes it all the more surprising that histories of the phonograph have had so little to say about the prominence of the spoken word at its initial demonstrations in America and Europe.[3]

No recordings were made of the exhibitions, unfortunately, but press reports enable us to reconstruct the sequence of events at many of them.[4] A typical demonstration began with an explanation of how the machine worked, followed by displays of recording and playback (Figure 1). The program opened with a greeting from the phonograph ("The phonograph presents its compliments to the audience") before moving on to some combination of recitations, songs, music, and random noises. Members of the audience were then invited to speak their own effusions into the phonograph, and the exhibitor sometimes brought the evening to a close by handing out torn-off slips of tinfoil as souvenirs. At nearly all of the demonstrations, the spoken word played a prominent role in showcasing recorded sound to audiences who had never before heard speech mechanically reproduced. Historians are only telling half the story when they describe the talking machine as if it were a singing machine.[5] Recent scholarship has begun to correct this imbalance by showing how the discourse of recorded sound developed in relation to print media.[6]

A witness to one of the initial phonograph demonstrations posed the question on every reader's mind: was it possible to record a novel "so that books can be procured in this form and by being placed on the Phonograph the entire story be told to the listening ear?"[7] Unfortunately, the wish was

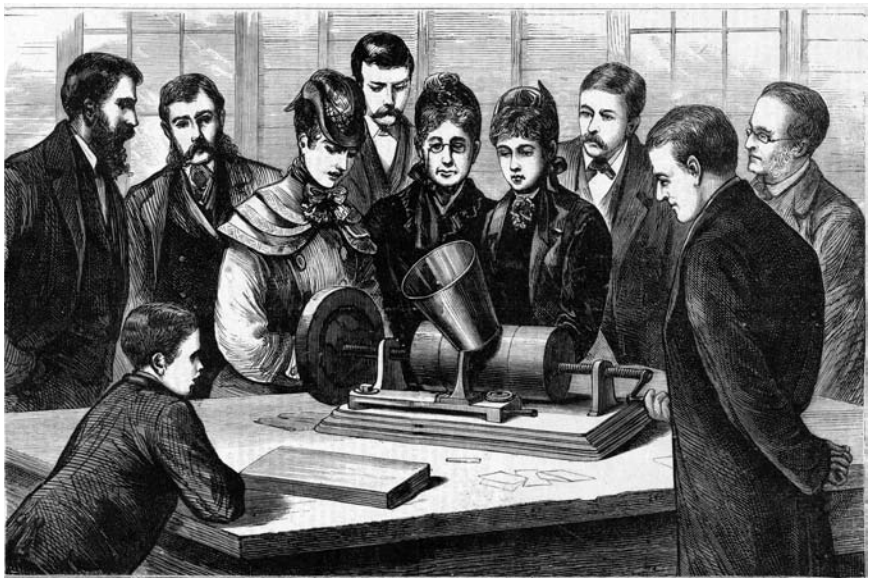

Figure 1 "New Jersey.—Professor Edison exhibiting the phonograph to visitors, at his laboratory, Menlo Park." From *Frank Leslie's Illustrated Newspaper*, March 30, 1878, 68.

years ahead of the technology. There was little hope of recording an entire novel in 1878 since tinfoil cylinders were restricted in playing time to a couple of minutes and were extremely difficult to reproduce.[8] The first recordings that might be thought of as literary were not made until a decade later, when Edison's improved phonograph made it possible to record the poets Alfred Tennyson and Robert Browning; recordings of full-length books had to wait until philanthropic initiatives for blind people in the 1930s.[9] However, it is a mistake to think that the phonograph's limitations in its own time constrained speculation about its future. Even if the inaugural recordings consisted of nursery rhymes and snippets of verse, the advent of phonograph technology made it possible to conceive of a recorded book fifty years in advance of its actual completion.

This essay takes up the question asked by Edison's contemporaries about the impact of sound-recording technology on print: "Are we to have a new kind of books?"[10] From the phonograph's first utterance, observers were powerfully drawn to the notion of a new kind of book existing in recorded form, to be heard rather than read. It has been said that the brief excerpts of verse and prose initially recorded on the phonograph had little to do

with the concept of "the book" since recordings of full-length novels were not made until the next century.[11] My findings tell a different story. They show instead how the very possibility of sound recording led audiences to reevaluate what the book was capable of doing in the first place. The pattern is a familiar one to media historians. The introduction of a new technology leads to renewed awareness of established technologies at the moment when their roles have been called into question.[12] The ensuing competition between them makes the advantages and limitations of both media stand out. In this case, the possibility of sound recording provoked a debate about the future of the book.

The deliberations over the book's future call into question whether the book has ever held a privileged position in relation to other media. Instead of accepting the printed book as a superior aesthetic format, a vocal group of readers valued spoken word recordings both as a return to literature's roots in the ancient Homeric tradition and as the next stage in the book's evolution. The preference for the spoken word suggests a different way of thinking about the influential narrative according to which the printing press marked a decisive turn away from orality and toward stable, introspective, and formally complex forms of print. For the first time, the phonograph confronted readers with a choice between two different forms of mechanical reproduction for their literature. The readers who stood to benefit ranged from those who were simply curious about alternative formats for literature to those who had been left behind because of disabilities, illiteracy, or limited access to print.

The book would compete with other media in the coming century—namely, film, radio, television, and, most recently, digital media—but the phonograph was the first to challenge its monopoly on the word. Friedrich Kittler credited the phonograph with "the death of the author" for bringing audiences into contact with the writer's actual voice at the expense of the imaginary one invoked by the silent page.[13] Yet Kittler's devaluing of the voice in the wake of sound-recording technology underestimates the appeal of the spoken word. As the demand for recorded forms of literature attests, the death of the author was the birth of the listener. Edison anticipated reaching a new audience through "Phonographic Books," for instance, each consisting of roughly 40,000 words recorded on a single ten-inch-square metal plate. According to Edison, "The advantages of such books over those printed are too readily seen to need mention. Such books would be listened to where now none are read."[14] Edison's proposal brings into focus how sound-recording technology altered conceptions of the book in the closing

decades of the nineteenth century. What has yet to be explained is why so many of Edison's contemporaries assumed that the phonograph would lead to the end of the printed book altogether. This essay accounts for the book's premature obituary through its attention, first, to the initial responses to the phonograph as a potential rival to the printed book, and, second, to a series of hypothetical reading machines proposed by Edward Bellamy, Octave Uzanne, Albert Robida, and others writing at the end of the nineteenth century. As we will see, the questions about the book's future that were raised by these writers in response to the new media of their time have once again become pressing questions in our own time.

Bottled Authors

The press began to speculate about the impact sound recording would have on the book even before the phonograph's completion. The *New York Times* used an unlikely analogy to explain the invention a month before its trial at Menlo Park. The preservation of speech on tinfoil, the paper advised, was comparable to that of wine by the bottle; when it comes to sound, the phonograph "bottles it up" for future use. Audiences would be able to purchase "bottled orations" and "bottled sermons" sold in quart bottles for fifty cents apiece, and the man of taste with a "well-stocked oratorical cellar" would be able to entertain guests with a "dry 'Mark Twain.'"[15] The speed with which bottled speech became a stock phrase in subsequent reporting about Edison indicates how reassuring audiences found it to have a new technology explained in terms of an old one. *Punch* responded to the conceit with a cartoon showing a cellar full of bottled opera to be uncorked on special occasions (Figure 2).

However humorous the analogy, it represents one of the earliest forecasts of a commercial market for recorded speech. Before even hearing the phonograph, the *New York Times* made the following tongue-in-cheek prediction about its impact on the novel:

> There is good reason to believe that if the phonograph proves to be what its inventor claims that it is, both book-making and reading will fall into disuse. Why should we print a speech when it can be bottled, and why should we learn to read when, if some skillful elocutionist merely repeats one of "George Eliot's" novels aloud in the presence of a phonograph, we can subsequently listen to it

Figure 2 Cellar full of bottled music. From *Punch's Almanack for 1878*, December 14, 1877, 3.

without taking the slightest trouble? We shall be able to buy Dickens and Thackeray by the single bottle or by the dozen, and rural families can lay in a hogshead of "Timothy Titcomb" every Fall for consumption during the Winter. Instead of libraries filled with combustible books, we shall have vast storehouses of bottled authors, and though students in college may be required to learn the use of books, just as they now learn the dead languages, they will not be expected to make any practical use of the study.[16]

Books to bottles: an audacious claim to make about an invention that had yet to utter a word. The facetious report nevertheless formulated ideas that were taken seriously in the upcoming battle of the books. First, the report identifies a potential market for recorded literature through its image of a storehouse of bottled authors made up of Eliot, Dickens, Thackeray, and Josiah Gilbert Holland ("Timothy Titcomb"). Second, it calls into question the future of book-making by insisting that the recorded book would supersede, not supplement, the printed book. Third, the report establishes a link between recorded literature and the professional reader. Only someone trained in the discipline of elocution could read a book to maximal effect while asking from the reader minimal effort ("without taking the slightest trouble"). Use of the passive term "consumption" here invokes a long tradition of denigrating novels as overly commercial commodities with little aesthetic value that would later be revived by twentieth-century critics to dismiss audiobooks along similar lines.[17] While the newspaper's exaggerated claims may be easy to disregard, the press took up its other themes with increasing seriousness.

The *New York Times* was not alone in anticipating the swift obsolescence of print. Talk of the book's future had begun with a letter from Edison's press representative, Edward H. Johnson, announcing the possibility of sound recording in *Scientific American*. In response to Johnson's announcement, an editor posed the question: "Are we to have a new kind of books? There is no reason why the orations of our modern Ciceros should not be recorded and detachably bound so that we can run the indented slips through the machine, and in the quiet of our own apartments listen again, and as often as we will, to the eloquent words."[18] The answer was "yes" for those who tolerated the printed page as the only available option. Prior to the phonograph, reading aloud had been a communal activity; there was no precedent for the experience of listening to a stranger read aloud in the privacy of one's home. The passage's emphasis on solitary listening ("the quiet of our own apartments") and repeated playback ("as often as we will") suggests readers discerned in the indented slip new possibilities for close listening that would have been impossible amid the hubbub of a public recital. For such listeners, phonographic books provided a welcome alternative to silent reading.

The editor's allusion to Cicero is revealing. Here was an ancient figure famed for oration despite reaching modern audiences solely through print. The allusion offered a reminder that printed, not spoken, literature was the latecomer to the republic of letters. Nearly all works of literature prior to the sixteenth century had originally circulated outside of print before their

reproduction in book form by later generations.[19] Whereas twentieth- and twenty-first-century debates over the merits of recorded books tend to concentrate on authors who write specifically for print media, the initial accounts in periodicals like *Scientific American* focused on authors diminished by the transition to print. Readers who express discomfort toward hearing printed books read aloud seldom express the same unease toward reading oral forms of literature in print. To put it another way: silently reading Cicero is no less of a compromise than reading aloud Eliot, Dickens, and Thackeray. This did not prevent the orator from being read in print, of course. The second book printed on Gutenberg's press was Cicero's *De Officiis*.

The new kind of books proposed by the *New York Times* and *Scientific American* conformed to the predictions made by the talking machine's inventor about using the phonograph to read aloud. It has often been pointed out that Edison failed to grasp the phonograph's entertainment potential owing to his interest in developing it as a dictation device for use by businesses.[20] But Edison did identify other uses for it: writing letters; teaching elocution; playing music; recording courtroom testimony; preserving family archives; and making clocks that announced the hours of the day. He also proposed using the phonograph to read aloud:

> Books may be read by the charitably-inclined professional reader, or by such readers especially employed for that purpose, and the record of [each] book used in the asylums of the blind, hospitals, the sick-chamber, or even with great profit and amusement by the lady or gentleman whose eyes and hands may be otherwise employed; or, again, because of the greater enjoyment to be had from a book when read by an elocutionist than when read by the average reader.[21]

One advantage to using the phonograph as a reading machine was its accessibility to both sighted and blind readerships. Tactile alphabets for people with vision impairments required training, whereas anyone could listen to a book. This was an appealing prospect to people who were newly blind as well as to readers who merely feared endangering their eyesight from overuse. Such readers welcomed the phonograph as a means of relieving the disproportionate burden borne by the eyes. The strain placed on the eyes by reading books was commonly held to be responsible for deteriorating eyesight—Milton was often invoked as a cautionary tale. Engineers likewise recognized the phonograph's potential to aid blind readers who were unable to read Braille. In March 1878 Alfred Mayer, a physics professor writing

a textbook on sound, corresponded with Edison about a portable device for reading books to those who were blind. The blind reader would drag Mayer's handheld unit, made up of a stylus attached to a vibrating plate, over indented lines in a metal sheet so that "the page will talk to him."[22]

Disability has always been a driving force behind the technology for recorded books.[23] The fear of ocular degeneration caused by reading underlay the initial discussions of printing for people who were blind in the eighteenth and nineteenth centuries. Valentin Haüy, who developed a system of raised letters in 1784, regretted that the method could not be of use to blind authors such as Homer and Milton.[24] Still, even if it may seem obvious to us now, the connection between sound-recording technology and books for those who were blind was not an inevitable one in Edison's time. (Edison's rival Emile Berliner overlooked blind readers altogether.) For much of the nineteenth century, education of those who were blind focused on the relationship between sight and touch, not hearing. The distinction between reading with the eyes and reading with the fingers had preoccupied educators ever since the importation of embossed letters to Britain and the United States in the 1820s and early 1830s.[25] A successful campaign by organizations such as the British Foreign Blind Association to promote the use of Louis Braille's script system over other tactile alphabets firmly established Braille in both countries by the end of the century.[26]

Yet it is equally important to note that recorded books were never meant for people with disabilities alone. It is a misconception that recorded books began as a format for blind readers before being taken up by a broader readership in the second half of the twentieth century in the form of audiobooks.[27] The audience for the recorded word reached well beyond those with disabilities from the outset. Edison's hypothetical audience had always included "the average reader" lacking either the time or the inclination to hold a book. His statement is one of the first to characterize reading as a secondary activity intended to accompany other pursuits. More important, it endorses the professionalization of reading by insisting on the increased "amusement," "enjoyment," and "profit" to be had from listening to a reader trained in elocution. There is no idealization here of the silent reader's ability to voice texts for himself or herself. Even if audiences are already reading, Edison implies, they are not reading very well.

Efforts to promote the phonograph as an improved version of the book express the conservatism of the initial attempts to figure out the machine's worth as a reading machine. Despite calls for a new kind of books, the actual accounts of those books adhered closely to traditional formats. Most people used the phonograph to record existing genres (books, lectures, ser-

mons, letters, advertisements) instead of new forms of speech devised specifically for it. Their dependence on the material book suggests that the phonograph and print developed in close relation to one another no matter how frequently journalists placed them in opposition.[28] The phonograph repeated the pattern of other emerging communications technologies by imitating its predecessors, just as Gutenberg's printing press initially produced volumes resembling manuscripts.[29] Such precedents suggest the need for caution when evaluating claims made on behalf of the phonograph to revolutionize the book. In fact, few attempts were made to produce an art form distinct from print until the following century. Far more enticing was the prospect of listening to established authors such as Dickens.

Edison intended to capitalize on the demand for recorded books by opening a publishing house in New York. Its catalog would feature "an ordinary 50-cent novel" recorded on six-inch circular plates, among other recitations suitable for home entertainment.[30] Edison claimed to have already received 100 orders from people who were blind, and he hoped to generate similar demand from other readers. But first it was necessary for Edison to domesticate the phonograph if it was ever to become a household consumer good, as the Edison Speaking Phonograph Company envisioned. He did so by translating the familiar experience of hearing a book read aloud in a public venue to the more intimate space of the home. Edison told the *New York Sun*:

> Say I hire a good elocutionist to read David Copperfield or any other work. His words are taken down by machine, and thousands of matrixes of David Copperfield produced. A man can place them in the machine, and lie in bed, while the novel is read to him by the instrument with the finest grade of feeling and accent. He can make it read slow or fast, can stop it when he pleases, and go back and begin again at any chapter he may choose.[31]

Books at bedtime must have been an appealing notion at a time when reading in bed posed very real difficulties, not least of which was hazardous lighting. If the image of a man listening to a book while lying in bed underscores the perceived passivity of the activity, this is counteracted by the recipient's degree of control over the delivery, from its tempo to interruption and replay—features distinguishing mechanical reading from live oration. The intimacy of the scene stands out despite the presence of a mechanical speaker. Reading aloud in the bedroom would have been impossible without one for most people.

Edison's marketing campaign sought to domesticate the phonograph by portraying it as a leisure activity in an ordinary household. The following vignette features a couple who have purchased an entire Dickens novel on a single sheet of tinfoil for twenty-five cents: "A man is tired and his wife's eyes are failing, and so they sit around a table and hear the [phonograph] read from this sheet the whole novel with all the expression of a first-class reader. See?"[32] The scene can be read in two ways. In one reading, the scene translates the iconic image of paterfamilias reading aloud to the family into its technological equivalent—with the upgrade of the mechanical reader's "first-class" delivery. In another, the device relieves the woman from the duty of reading aloud to her husband (think of Milton again, this time from the perspective of his daughters).[33] The couple represents the two types of readers Edison had in mind: the leisure reader seeking to relax after a day's work and the reader on the verge of losing her eyesight. The pun with which the quotation ends invites tired-eyed spectators to visualize themselves in either role.

The association between Dickens and reading aloud made him a popular choice with which to illustrate the phonograph's value as a reading machine. Dickens was frequently cited in discussions of sound recording despite the inconvenient fact that the phonograph was incapable of recording his novels. Edison memorably claimed to be able to record *Nicholas Nickleby* in its entirety on four eight-inch cylinders in 1888.[34] But even then novels were simply too long to record since the standard phonograph cylinder had a maximum playing time of a little over three minutes. The author was nonetheless a shrewd choice since the name of Dickens was shorthand for the novel itself and appealed to a Victorian sensibility that equated "book" and "novel." At a time when the technical limitations of the phonograph prevented the recitation of more than a few lines of verse, it made sense to pitch the conversation toward the ideal rather than the disappointing reality. The two poles on the spectrum of phonograph recording might be said to be "Mary Had a Little Lamb" and *Nicholas Nickleby* owing to their differences in complexity, in length, in form, and in fact, too, since only one of them was actually recorded.

Use of Dickens's name raised issues of performance, adaptation, and even copyright that made him a valuable advertisement for phonographic books. Edison's advocates promoted the phonograph using the genre least associated with recitation (the novel as opposed to poetry or drama). The novel's association with print seemingly set it apart from other genres originally intended for aural reception. Yet Dickens's novels fit both categories since

he was among the most theatrical of nineteenth-century novelists. Adapting Dickens's novels for recitation risked few objections since the author was renowned for doing just that during his reading tours of America and Britain.[35] The "audio-visual Dickens" familiar to audiences from theatrical performances and staged readings had always exceeded the printed page.[36] To this day Dickens is routinely cited as an author better heard than read. Recording a British author had the further advantage of sidestepping the thorny issue of copyright. It was uncertain how the issue of phonographic royalties would be resolved or whether publishers might be required to compensate authors for reproducing their work in other media. British writers were not protected by copyright in the United States, of course, until the final decade of the nineteenth century—an oversight notoriously championed by Dickens during his first visit to America.[37] Hence, a Dickens title represented not just entertainment but *free* entertainment in the eyes of publishers.

There was little consensus as to whether the phonograph would be used to facilitate reading aloud at public venues or in the privacy of one's home. Some foresaw the phonograph replacing the live orator by addressing large groups in public halls or schoolrooms. Mechanical reproduction was especially appealing in environments where it was expensive or impractical to invite a speaker. For example, one journalist envisaged the phonograph reciting John B. Gough's temperance stories to a gathering of Nevada miners.[38] Other readers looked forward to solitary forms of reception that would have been impossible without the phonograph. The Dickens vignettes cited above retain the most attractive features of both public oration and private reading by emphasizing the benefits of reading aloud—superior elocution, dramatic delivery, and accessibility—while at the same time combining them with features formerly reserved for silent reading—control over one's environment, pace of narration, and solitude. In this sense, the phonograph introduced a distinct form of reading representing the best of both worlds.

A key strategy through which Edison ushered in the new era of recorded sound was by harkening back to older forms of entertainment that had preceded the phonograph. The use of nostalgia to promote the technology diverted attention away from the potential threat it posed to the tradition of reading aloud. This is apparent in a *Daily Graphic* cartoon portraying Edison's idealized domestic scene alongside the caption: "The phonograph at home reading out a novel" (Figure 3). The scene is reminiscent of the archetypal Victorian image of family entertainment, with the crucial substitution of the phonograph. The family members otherwise conform to conventional

roles: father smokes a cigar, mother does needlework, and the two children obediently sit at the table during the recitation. The eyes and hands of the parents are free for labor or leisure, as Edison had promised, while the children respond to the phonograph as if it were a live orator, leaning in and staring directly at the machine with rapt attention. By aligning itself with a familiar domestic ritual, the bookless scene elides any sense of discomfort toward the displacement of an age-old domestic pastime or of the commodification of storytelling by Edison's invention. It appears instead in the guise of a sensible, labor-saving device with few consequences for the family. The phonograph is indeed "at home."

Figure 3 "The phonograph at home reading out a novel." From "The Papa of the Phonograph," *Daily Graphic* (New York), April 2, 1878, 1. The Western Reserve Historical Society, Cleveland, Ohio.

The successful advertising campaign inspired one newspaper to predict "a nation of listeners" within thirty years.[39] The economics of publishing cylinders and discs would supposedly expedite America's transition from a reading to a listening nation. Numerous editorials insisted that publishers could produce books more cost effectively using the phonograph than the printing press. The *Chicago Tribune* wrote of the phonograph, "One application of this quality will revolutionize the whole world of literature."[40] Edison told the paper that he was able to reproduce an entire novel for less than the cost of its print equivalent:

> Now, suppose that a publisher employs one of the most famous elocutionists of the age to talk one of Dickens' best novels upon a phonograph plate. By the stereotype process these plates are reproduced as fast as we wanted, and much cheaper than books can be sold. The purchaser buys one of these plates for a mere song, takes it home of an evening, puts it in the machine, gets one of his children to turn the crank, and straightway Mr. [James] Murdock, Mr. [George] Vandenhoff, or Mrs. [Laura] Dainty commences reading the novel to the delighted family.[41]

The prediction is an optimistic one, coming from a source more interested in marketing the phonograph as an alternative to books than in reforming the publishing world. Notably left out of these calculations are the additional expenses of professional actors or elocutionists. The substantial labor costs involved in recording full-length literary texts—not to mention the three-decker novels of Dickens—are still a prohibitive feature of today's audiobook publishing industry. Commercial recordings of literary texts were all but impossible to make at a time when speakers needed to record each cylinder separately since, despite Edison's talk of stereotyping, there was no straightforward method of duplication prior to Berliner's gramophone in the 1890s.[42] The estimate also neglects to account for the declining costs of book production and the numerous conveniences of print.[43]

Edison's publishing house never managed to record a fifty-cent novel. Still, the press looked ahead to an environment unimpeded by technological limitations. Nearly everyone who responded to Edison's overambitious claims foresaw a time when it would be viable to record entire books—even Dickens. In the words of one starry-eyed journalist: "The library of the future will be one which any man can carry under his arm."[44] Recorded books were still very much seen as books. No one expected the book's demise, only its conversion into a different format. As Marshall McLuhan

long ago pointed out, new media take their content from the media they replace.[45] The enthusiasm for recorded books is unsurprising in a culture already steeped in oral performance off the page and on the stage. What stands out nevertheless is how one-sided the conversations are in favor of recorded books; rarely does one find a defense of printed books, as one finds so readily among the next century's defenses of the tactile pleasures of holding a material object in one's hands. Nostalgia for the book required a more pressing threat than the tinfoil phonograph.

The Metal Automatic Book of the Future

The phonograph may have remained silent during the ten-year interval between its debut and the first literary recordings of note, but its advocates did not. Their silence was broken by an unlikely source—an eccentric essay written in 1883 by the University of Minnesota's Professor Evert Nymanover calling for the replacement of printed books by "whispering machines." Yet what might sound perfectly reasonable to modern readers acquainted with portable listening devices such as iPods and smartphones sounded preposterous to Nymanover's contemporaries. The essay's odd mixture of English, German, and Swedish, its pseudoscientific calculations, and its florid oratory made it an object of ridicule after its submission to *Scientific American*. Nymanover compounded the problem by proposing to lodge the machines in people's hats. The unorthodox solution would allow them to continue reading while performing other activities: "Everyone while sitting in the cars, walking in the streets, reclining on beds and sofas, could be perpetually listening to Adam Smith's moral sentiments, Draper's intellectual development, etc., and yet be at the same time talking, resting, working at a carpenter's bench, dressing, promenading, practicing finger-exercises on the piano, or other instruments, and so forth."[46] One activity stands out here: what kind of reader can listen to a book and talk at the same time?

Nymanover's vision of carpenters listening to Adam Smith's *The Theory of Moral Sentiments* (1759) and John William Draper's *The History of the Intellectual Development of Europe* (1862) reveals lofty expectations for a format that has since come to be associated with distraction. His notion of subliminal self-improvement while the conscious mind is preoccupied with other activities anticipates the twentieth century's faith in listening to self-help books while you sleep—if not its paranoia toward new forms of government indoctrination portrayed in Aldous Huxley's *Brave New World* (1932)

(Figure 4).[47] The passage nevertheless offers a glimpse of the direction taken by sound technology in the coming century. The proposal extends Edison's phonograph to mobile situations while at the same time capitalizing on the utilitarian imperative to improve minds and bodies simultaneously. The bizarre presentation made it difficult to take Nymanover's idea seriously, however, and the editors rejected whispering machines as the notion of a crackpot. The University of Minnesota's student magazine recommended that the author should be executed for ludicrously proposing that "a man could get the Encyclopaedia Britannica with every new hat he bought."[48]

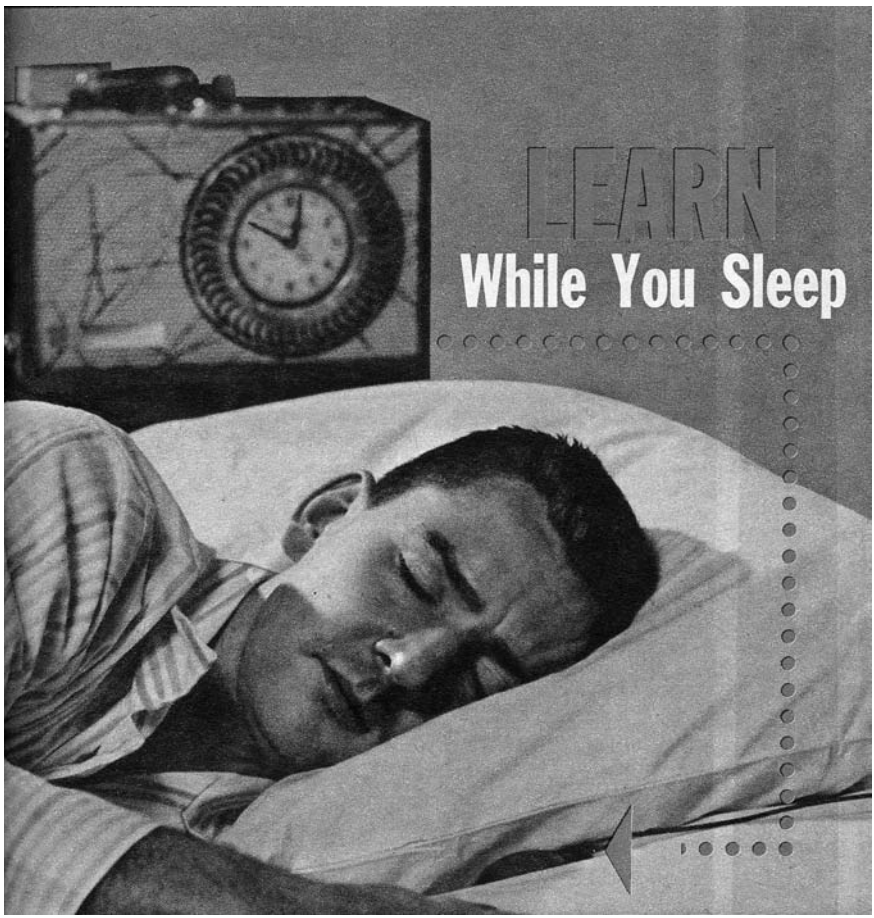

Figure 4 "The small voice under the pillow can teach you anything from self-confidence to college math." From Lester David, "Learn While You Sleep," *Mechanix Illustrated* (November 1958): 61.

Nothing more was heard from Nymanover's whispering machines until R. Balmer of the Bibliothèque Nationale de France published an essay in defense of them in the March 1885 issue of the *Nineteenth Century*, a legitimate forum for intellectual debate in which the idea would be taken seriously. Balmer, while acknowledging the original proposal's eccentricity, defended its core idea: the development of a portable mechanism for reading aloud. Phonographs could be used to imprint entire books on miniature metal cylinders embedded inside an automaton, then inserted into a person's hat and connected to the ear by wires. The tiny reading machine represented, in Balmer's words, the "metal automatic book of the future."[49] Nearly a century ahead of the Walkman, the contraption introduced a way of diverting urban commuters who were unable to read in crowded public spaces. One magazine observed that "a man might take a walk along a busy street, and have the book of the season read to him."[50]

Mechanical reading appealed to many as a way to democratize the book. The notion may seem counterintuitive at first since, as we now know, phonographic books were far less accessible than their print counterparts and unlikely to reach the readers who would most benefit from them. The expensive equipment alone was a barrier to widespread consumption. Yet the conviction that all members of society should have access to culture was an abiding one.[51] The yearning to hear the author's voice made it easy to forget how dependent that voice's delivery was on a mechanical apparatus that would take decades to turn into a mass consumer good. Advocates saw only the medium's potential to reach an audience whose limited literacy made print inaccessible, or for whom the cost of books was an obstacle.[52] Numerous illustrations set in industrial and agricultural environments reflect the initial optimism felt toward reaching potential readers denied access to print because of class, literacy, or geography. The whispering machine went far beyond the average reader: "It would accompany men to the office, to the factory, to the bench, to the field, to the ditch, down into the mines, whispering into their ears greater thoughts and imaginations, strengthening, ennobling, and refining the mind."[53] The benefits extended to men and women alike since the machines offered a way to educate housewives and domestic servants, too—candidates accustomed to reading aloud to suit the needs of others rather than for their own education. Edison even modified his sales pitch to include formerly marginalized readers when he brought out the improved phonograph in 1888, boasting to journalists, "The perfected phonograph is going to do more for the poor man than the printing press."[54] Such paternalism is at odds with the actual record of the phono-

graph, however, which remained unaffordable for most households until well into the twentieth century. Contrary to a marketing campaign offering entertainment for the middle classes and instruction for the working classes, there is no evidence that miners used the phonograph for self-improvement when given the chance.[55]

Nymanover's device was the first of a sequence of hypothetical reading machines devised by advocates for those who were blind, engineers, futurists, utopianists, and novelists over the next quarter century.[56] Utopian writers in particular paid close attention to mechanized forms of reading since it was difficult to imagine an ideal society in which books did not play a prominent role. The form through which books would reach readers was by no means clear, however. The majority of utopian writers believed that technology would provide the solution to problems of literacy as well as the means to achieving an ideal society. Many of these writers foresaw the library playing a prominent role in public life by providing a communal space for learning or improved access to books through mechanical means such as underground railways and pneumatic tubes.[57] Other writers addressed the growing abundance of print that threatened to exhaust the capacities of libraries—and readers—to manage. Still others dreamed up new kinds of books altogether.

Edward Bellamy was one such writer to rethink the book in the context of new sound-recording technologies. Bellamy is best known for *Looking Backward: 2000–1887* (1888), a science-fiction novel about the transformation of the United States into a socialist utopia in the year 2000. Its account of the book is oddly traditional, however, showing it to be untouched by the technological innovation so pervasive elsewhere in millennial Boston.[58] Bellamy's narrator turns for solace to the Victorian fiction of Dickens, for example, and the one modern narrative he reads is remarkable not for its form but rather its content, marked by the absence of melodramatic contrasts associated with social mobility in a capitalist society. There is no visible difference between the books of the nineteenth and twentieth centuries in Bellamy's utopia. He returned to the topic a year later in the short story "With the Eyes Shut" (1889), a radical rethinking of the book written after the author attended a phonograph demonstration. For Bellamy, the phonograph raised the question: why imagine the sounds of words when you could hear them read aloud?

Bellamy's prediction of recorded literature takes part in a long tradition of speculating about how new forms of technology would affect reading habits. The fantasy of a mechanical talking book predated sound-recording

technology by at least two centuries. Cyrano de Bergerac's *Histoire comique en voyage dans la lune* (1649), a tale about a rocket trip to the moon, includes an eyewitness report of a "Book made wholly for the Ears and not the Eyes" that hangs from the auditor's ears like a pair of pendants.[59] Hearing the narrative read aloud in a human voice is as easy as winding a spring. The key difference between de Bergerac's musings and those of postindustrial writers was the latter group's grounding in the actual technology of the era. Reviewers were quick to point out that Bellamy's fictional depiction of a recorded book was not nearly as far-fetched as the socialist utopia envisioned in *Looking Backward*. The *Western Electrician* boasted that engineers were already working to re-create the marvels of Bellamy's tale.[60]

"With the Eyes Shut" reflects Bellamy's interest in harnessing technology to relieve the burdens of labor at a time when the United States was becoming an increasingly industrialized nation.[61] Like its predecessor, the framed narrative begins with a man who wakes up in a futuristic society transformed by technology. That society's citizens have little need to read for themselves since they are read to by an "indispensable," Bellamy's term for the portable phonographic device used to play spoken word recordings of everything from letters to literature.[62] (The name suggests that our dependency on technology was already apparent even in its utopian representations.) The premise indicates the enthusiasm readers felt toward the ease of listening to recorded books. In other words, a crucial part of their appeal was the very passivity for which audiobooks are criticized today.[63] We see this in the story's first scene involving an unnamed narrator who listens to "phonographed books" using a "two-pronged ear-trumpet" plugged into the railway carriage, allowing him to hear a novel read aloud for the price of five cents an hour. Here is how Bellamy's narrator describes the experience of reading with the eyes shut:

> A good story is highly entertaining even when we have to get at it by the roundabout means of spelling out the signs that stand for the words, and imagining them uttered, and then imagining what they would mean if uttered. What then shall be said of the delight of sitting at one's ease, with closed eyes, listening to the same story poured into one's ears in the strong, sweet, musical tones of a perfect mistress of the art of story-telling, and of the expression and excitation by means of the voice of every emotion?[64]

The seduction of the listener is striking. Bellamy's account purposefully exaggerates the gap between the two modes of reception: the laborious, inef-

ficient deciphering of the printed word in contrast to the effortless reception of the words whispered into the ear. The scene operates as a bibliographic litmus test in its staging of the male reader's seduction by the female storyteller, seen either as a Siren or a Scheherazade depending on the spectator's stance toward reading. In fact, modern critics have singled out "seduction" as the principal hazard of listening to recorded books.[65] The passage's erotic language sets the terms of debate in the next century by intimating the potential danger in having a book read to you. The most enduring critique of the recorded book may not be that it is an ineffective way of delivering the text. To the contrary, it is too powerful. The narrator's excitation offers a glimpse of the discomfort arising from the threat of seduction posed by a feminized mass culture at the beginning of the twentieth century.[66] The printed page offered an antidote to the reader's excitation by ensuring a critical distance perceived to be impossible—even undesirable, from Bellamy's perspective—when unmediated by the printed page.

The ergonomics of reading warrant attention since modern audiences seldom think of reading novels as work—at least not to the same degree as an audience for whom books entailed manual as much as mental labor.[67] Utopian writers remind us of the effort required before interpretation even begins: cutting the leaves of a book; turning the pages; holding it open before weary eyes. Bellamy's concern for the reader's physical pleasure conflicts with a later modernist sensibility associating literary value with mental difficulty and discomfort.[68] According to Bellamy's account, the bodily fatigue entailed by reading saps energy best reserved for the brain. In fact, the speculative behavior associated with the very nature of reading is what Bellamy's narrator yearns to move beyond. Nearly all accounts of phonograph recitals emphasize the ease of listening to books in contrast to the effort involved in reading them. As we have already seen, the strain printed books placed on the eyesight in particular made readers think of books in distinctly physiological terms. One of Bellamy's reviewers, for instance, spoke longingly of "the days when [the eyes] are tortured by small type, dim light and weariness are gone forever."[69] Other potential benefits to the body included greater facial expressiveness and even improved posture—sacrificing the book's spine in order to preserve one's own.

The most utopian element of the story may be its faith in technology to improve the reading experience through the help of experts. We see this as a bookshop's customers test out versions of the same title recited by different speakers, who vary in terms of style and quality. The implication is that literary recitation is a matter best left to the experts. There is no nostalgia

for silent reading, no deference to the authority of the original text, and no mention of a decline in quality—to the contrary, the speaker enhances the work. Bellamy's narrator experiences the difference firsthand when listening to Tennyson's "Claribel" done in different voices by baritone, bass, contralto, and soprano speakers. The host assures our narrator that no man of taste would be content with a single rendering of the greatest writers.

Tennyson was an appropriate choice as an author renowned for "word music," a delight in the sound of language (sometimes at the expense of substance, at least according to his critics).[70] Bellamy had previously quoted Tennyson's "Locksley Hall" in *Looking Backward* as a precedent for its prophetic speaker. Here he chooses a poem noted less for its utopian optimism than for its sound effects. Tennyson referred to the poem as "A Melody," and there would be little to the short pastoral lyric were it not for the emphasis on sound to bring out the voices of nature alongside Claribel's grave.[71] Of course, Tennyson was an appropriate choice for another reason: he was among the first poets to record their work on the phonograph, a year after the publication of Bellamy's tale.[72] Historians are fond of crediting the predictions that Bellamy got right: credit cards, shopping malls, electronic broadcasting, and so forth. Let us add to that list phonograph recordings of Britain's poet laureate.

Utopian fantasies of a mechanical reading machine reflect the era's optimism toward uninterrupted scientific progress. In this context, the evolution of the printed book into a new format was welcomed as one of many technological advances meant to improve people's quality of life. The fin-de-siècle French futurists Octave Uzanne and Albert Robida followed Bellamy's lead in imagining how new media such as the phonograph would remake the book. Their short tale "The End of Books" appeared in English translation in *Scribner's Magazine* in 1894 as well as in the French volume *Contes pour les bibliophiles* in 1895. Ironically, the story's author was a self-professed bibliophile. Uzanne was unusual among book collectors in embracing the technological advances that had upended the book trade during the nineteenth century. Instead of rejecting industrialization wholesale, he encouraged the use of industrial techniques to refashion the book into an objet d'art.[73] The story's illustrator, Robida, was less ambivalent about the future and has garnered interest recently for predictions (including radio, televisions, and video phones) that have turned out to be more accurate than those of his better known contemporary, Jules Verne.[74]

The tale begins with a conventional science-fiction question: what will society look like a hundred years from now? A group of intellectuals who meet

in London to address the question foresee the replacement of the book as a bound object made of paper and ink by the machinery of a post-Gutenberg age. In the narrator's words, "phonography will probably be the destruction of printing."[75] Yet the story's epitaph for print is misleading. The slogans "the end of books" and "the future of books" have equivalent meanings here since what Uzanne and Robida are describing is the remediation of books—that is, their conversion from an old medium into a new one—in response to competition from rival media.[76] Books continue to circulate in nonprint forms through audiovisual media—namely, reading machines. The machine envisioned by Uzanne and Robida is a miniature phonograph strapped to one's shoulder and connected to the ears by a set of flexible tubes (Figure 5). The spoken word reaches a mass audience through similar phonographic machinery including free listening stations in public squares; vending machines selling recordings of Dickens and Longfellow for the price of a nickel; and a Pullman Circulating Library for the entertainment of railway passengers (Figure 6). Modern-day troubadours promote their books by carrying a portable phonograph from one apartment building to the next, where residents listen to them through elongated tubes stretching up to their windowsills (Figure 7). The French version of the story includes Robida's sketch of a *Bibliothèque universelle phonographique* ("universal phonographic library") capable of playing novels, poetry, history, and philosophy in one's home for an annual subscription of 100 francs (Figure 8). A dial set to "*gai*" (comic) or "*triste*" (tragic) even allows the machine to cater to individual tastes for a happy ending.

The story calls attention to how much of our vocabulary for discussing books makes sense only in relation to a particular format for them. Authors in a post-Gutenberg era need no longer be thought of as "Writers" at all since they will "talk" their works instead (225)—as *The Times* of London had predicted authors would do as early as 1878.[77] (Ironically, the phonograph's appeal for many writers was as the very dictation tool promoted by Edison for use by businesses.) The term "narrator" likewise has very different meanings depending on whether a book is read aloud or in silence. A listening audience compels authors to renew attention to "the art of utterance" or risk obsolescence (225). The highest demand will be for the "ravisher of the ear" distinguished by a well-pitched delivery instead of an ornate writing style catering to the eye (225). Deceased or vocally challenged authors alike will rely on professional voice actors or "favorite Tellers" to narrate their works, as in the cases of, say, Tommaso Salvini's Dante, Henry Irving's Shakespeare, or Sara Bernhardt's Victor Hugo (226).

Figure 5 "Phonographic literature for the promenade." From Octave Uzanne and Albert Robida, "The End of Books," *Scribner's Magazine* 16 (August 1894): 228.

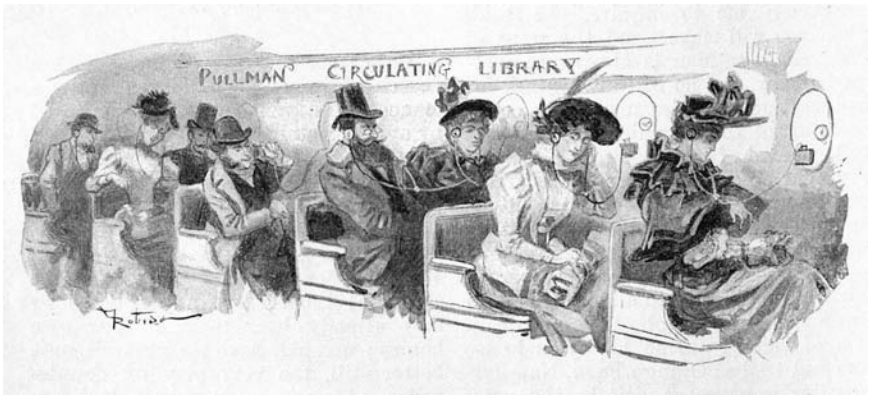

Figure 6 "Reading on the Limited." From Octave Uzanne and Albert Robida, "The End of Books," *Scribner's Magazine* 16 (August 1894): 230.

Figure 7 "The author exploiting his own works." From Octave Uzanne and Albert Robida, "The End of Books," *Scribner's Magazine* 16 (August 1894): 229.

Figure 8 "Littérature et musique 'at home.'" From "La Fin des livres," in Octave Uzanne and Albert Robida, *Contes pour les bibliophiles* (Paris: Quantin, 1895), plate between 136 and 137. By permission of the Houghton Library, Harvard University.

Professional narrators posed a challenge to bookish conventions by reproducing sonic aspects of the text habitually left unvoiced on the printed page: an Irish accent, the murmur of the crowd, the melody of "La Marseillaise." Books would never sound the same once the narrative's implied voice began competing with a full cast.

"The End of Books" addresses the question implicitly raised by all accounts of recorded literature: are reading and listening to books the same thing? Many of the terms used by Uzanne and Robida merely translate a bibliographic vocabulary into a phonographic one: narrator to "phonist," novel to "storygraph" (225). Yet there is no simple translation for the term "reading." Cyrano de Bergerac's seventeenth-century account was already using the term "readers" in quotation marks in order to evade the question of similitude.[78] The absence of a single term to describe the act of listening is a problem evident in all accounts of the recorded book, some of which use the terms "reading" and "listening" interchangeably, others of which use the two terms in opposition in order to register distinct activities. For example, Bellamy describes a society in which "to listen was to read," whereas Uzanne and Robida speak of a future in which "Hearers will not regret the time when they were readers."[79] The textual evidence is proof that even a culture far more assured than our own when it comes to reading aloud struggled to resolve a question that persists to the present day. The inconsistency at least suggests that authors were aware of the troubling set of questions about the nature of reading raised by the adaptation of the book into other media, a process culminating here in illustrated books made using Edison's Kinetograph, one of the earliest cameras used to film motion pictures.[80] The increasingly sophisticated technologies envisioned by Uzanne and Robida acknowledge the inescapable fact that the book was becoming more and more of a multimedia production with every passing year. In doing so, they raise doubts about whether such futuristic books involve the cognitive act of reading at all.

Readers who favored the status quo could take comfort in the skepticism voiced by an anonymous reviewer for the *Bookworm* after the story came out: "No phonograph, however entrancing its tones may be, can ever affect the dominion of the printed page."[81] The publication's very title suggests that the book was unlikely to go away without a struggle. Uzanne stood by his faith in phonography to transform the book, however. Two years after the publication of "The End of Books," Uzanne wondered: "Who might tell us, in effect, what will be the state of Bibliophilia in the year 2000? Will the art of typographic impression still exist at that date, and will the

phonograph . . . not definitively replace printed paper and illustration with some advantage?"[82] It is a question that might have been taken straight out of Bellamy's *Looking Backward*. It is also one that we can answer from the perspective of the twenty-first century, when the printed book continues to survive alongside other media despite renewed calls for its demise.[83] Book historians have heard it all before.[84] The post-Gutenberg era has taken longer to get under way than writers such as Uzanne and Robida imagined.

The supersession of the printed book was nevertheless inevitable in the eyes of Balmer, Bellamy, Uzanne, Robida, and many of their contemporaries. These writers used the advent of sound-recording technology as an opportunity to speculate about what form books might take in the future while at the same time calling into question the utility of their current format. The superiority of the spoken page to the silent one was a standard claim made in accounts of the phonograph. As Balmer complained of print, "one half the power of literature is lost. No book is ever read as its author intended it should be read."[85] If readers had settled for print, it was only because no other option had been available until now. New forms of mechanical reproduction invited the book's discontents to formulate alternatives to it, as Balmer would do: "The full realization of what the printed book was intended to do will be the glorious mission of the phonographic reading-machine."[86] This theme—the recorded book as the next stage in the evolution of the printed book—appears repeatedly throughout the deliberations over the future of the book occurring in the 1880s and 1890s. According to these accounts, the recorded book was not merely an alternative to the printed book. It was the realization of what the book was always meant to do.

Nostalgia for the book may tell us more about our own time period than about the past. The initial responses to the recorded book suggest that modern perspectives are historically anachronistic in their privileging of the printed book over rival media. By contrast, those who took part in the discussions of recorded books taking place during the 1880s and 1890s in America, Britain, and France were quick to point out that the book was itself a technology of recent invention, one that had supplanted manuscript culture before going through its own transformations. The book's ongoing development was not lost on Balmer, who declared: "To stop short at the phonograph would be much the same in its consequence as if the age of Faust and Gutenberg had remained content with its immovable types or the pen of the copyist."[87] Such appeals urged contemporaries to capitalize on a historic event that might turn out to be as pivotal to the history of literature as Gutenberg's printing press, which figured in the deliberations as an emblem for the entire history of printing.

The explicit comparison made by Edison's contemporaries between Gutenberg's printing press and the phonograph helped to reframe the conversation about spoken word recordings as one about the nature of the book itself. A widely circulated account of Balmer's piece in the *Pall Mall Gazette* put the question in the following terms: "Why does not some modern Gutenberg do for the phonograph what has been already done for the printing press?"[88] The mechanical reproduction of the book was at stake here. Just as the Gutenberg press freed the book from its dependence on the scribe, the phonograph represented an analogous end to the book's dependence on print. If such optimism toward the evolution of the book makes many readers uncomfortable today, at a moment when the printed book's longevity is again in doubt, then that is partly because we have become used to associating print with progress and are unsure how to respond to the challenges posed to it by new media.[89]

The conventional narrative proposes that Edison developed the phonograph as a business device before consumers figured out ways of using it for entertainment purposes. This essay has shown that the sequence was the other way around when it came to talking books. The dream of a talking book—of a Gutenberg for the phonograph—existed long before the technology to make it a reality. Speculation about talking books, whether in the form of bottled authors or whispering machines, arose simultaneously with the advent of phonograph technology and anticipated the completion of an actual talking book by nearly half a century.

If literary critics have been skeptical about the value of the recorded book, relegating it to a minor role in relation to the printed book, the phonograph's first listeners were more enthusiastic about the impact sound-recording technology would have on the republic of letters. The fantasy of recorded literature celebrated the possibilities presented by a new kind of books while at the same time directing attention to the book as a medium with distinct properties, and constraints, of its own. The enthusiasm for mechanical forms of reading suggests the limitations of a reading experience centered exclusively on print. The phonograph promised to change all of that through its preservation of the spoken word. Yet the revolution never happened—at least not during the nineteenth century. Recordings of full-length books had to wait until the 1930s, and portable listening devices stored in our hats until the 1980s. Until then, defenders of the printed book could remain silent as long as talking books did so too.

Notes

I would like to thank the American Academy of Arts & Sciences for a fellowship supporting the research for this article.

1. Edward H. Johnson, letter to the editor, *Scientific American*, November 17, 1877, 304. The development of the phonograph is described in Oliver Read and Walter L. Welch, *From Tin Foil to Stereo: Evolution of the Phonograph* (Indianapolis: Howard W. Sams, 1976); and Paul Israel, *Edison: A Life of Invention* (New York: John Wiley, 1998). Documents relating to the invention of the phonograph are available online from the Digital Edition of the Thomas A. Edison Papers Project, http://edison.rutgers.edu. For an account of prior technologies used to reproduce sound, such as Édouard-Léon Scott de Martinville's phonautograph, see Patrick Feaster, "Framing the Mechanical Voice: Generic Conventions of Early Phonograph Recording," *Folklore Forum* 32, nos. 1–2 (2001): 57–102; and Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham, N.C.: Duke University Press, 2003), 31–85. Sterne and Mitchell Akiyama address the relationship between phonograph and phonautograph in "'The Recording That Never Wanted to Be Heard' and Other Stories of Sonification," in *The Oxford Handbook of Sound Studies*, ed. Trevor Pinch and Karin Bijsterveld (Oxford: Oxford University Press, 2012), 544–560.

2. "Thus the first words ever spoken into the phonograph were these four simple lines of 'Mother Goose,'" Edison recalled at the turn of the century. "The First Phonograph," *Christian Advocate*, October 26, 1899, 74. The original tinfoil recording of "Mary Had a Little Lamb" no longer exists, though Edison's 1927 reenactment of the original recording is available online at http://www.nps.gov/edis/photosmultimedia/upload/EDIS-SCD-02.mp3.

3. Nearly all historical accounts of the phonograph focus on its relation to music. Recent examples include Michael Chanan, *Repeated Takes: A Short History of Recording and Its Effects on Music* (London: Verso, 1995); Timothy Day, *A Century of Recorded Music: Listening to Musical History* (New Haven, Conn.: Yale University Press, 2000); Evan Eisenberg, *The Recording Angel: Explorations in Phonography*, 2nd ed. (New Haven, Conn.: Yale University Press, 2005); and Mark Katz, *Capturing Sound: How Technology has Changed Music*, rev. ed. (Berkeley: University of California Press, 2010). David L. Morton Jr. attributes the emphasis on music to the scarcity of spoken word recordings, in *Sound Recording: The Life Story of a Technology* (Westport, Conn.: Greenwood Press, 2004), xi.

4. Lisa Gitelman provides a detailed account of the 1878 phonograph demonstrations in "Souvenir Foils: On the Status of Print at the Origin of Recorded Sound," in *New Media, 1740–1915*, ed. Lisa Gitelman and Geoffrey B. Pingree (Cambridge, Mass.: MIT Press, 2003), 157–173.

5. Russell Miller's *The History of Music Machines* (London: Drake, 1975) and Roger Boar's *The Incredible Music Machine* (London: Quartet Books, 1982) are representative titles from this expansive field of scholarship.

6. See Jason Camlot, "Early Talking Books: Spoken Recordings and Recitation Anthologies, 1880–1920," *Book History* 6 (2003): 147–173; and Lisa Gitelman, *Always Already New: Media, History, and the Data of Culture* (Cambridge, Mass.: MIT Press, 2006), 25–44.

7. "All About the Phonograph," *Christian at Work*, May 23, 1878, Thomas A. Edison Papers Digital Edition (hereafter cited as TAED) , MBSB10378.

8. "Cylinder," in *Encyclopedia of Recorded Sound*, 2nd ed., ed. Frank Hoffmann (New York: Routledge, 2005), 258–263.

9. John M. Picker discusses the Tennyson and Browning recordings in *Victorian Soundscapes* (New York: Oxford University Press, 2003), 110–145. On the establishment of the Library of Congress's talking book service in the 1930s, see Frances A. Koestler, *The Unseen Minority: A Social History of Blindness in the United States* (New York: David McKay Company, 1976), 130–152; *That All May Read: Library Service for Blind and Physically Handi-*

capped People (Washington, D.C.: Library of Congress, National Library Service for the Blind and Physically Handicapped, 1983), 65–219; and Marilyn Lundell Majeska, *Talking Books: Pioneering and Beyond* (Washington, D.C.: Library of Congress, National Library Service for the Blind and Physically Handicapped, 1988).

10. "A Wonderful Invention—Speech Capable of Indefinite Repetition from Automatic Records," *Scientific American*, November 17, 1877, 304.

11. Camlot, "Early Talking Books," 151.

12. See the essays on emerging communications technologies in David Thorburn and Henry Jenkins, eds., *Rethinking Media Change: The Aesthetics of Transition* (Cambridge, Mass.: MIT Press, 2003).

13. Friedrich A. Kittler, *Discourse Networks 1800/1900*, trans. Michael Metteer (Palo Alto, Calif.: Stanford University Press, 1990), 237. My approach has in common with media archaeologists an interest in retrieving episodes that have been lost, forgotten, or otherwise neglected by traditional accounts of the mass media. The essays gathered in Erkki Huhtamo and Jussi Parikka, eds., *Media Archaeology: Approaches, Applications, and Implications* (Berkeley: University of California Press, 2011), provide detailed accounts of the shared goals of historically oriented media studies.

14. Thomas A. Edison, "The Phonograph and Its Future," *North American Review* 126 (May 1878): 527–536, 534.

15. "The Phonograph," *New York Times*, November 7, 1877, 4.

16. Ibid.

17. On the novel's status as a commodity during the eighteenth and nineteenth centuries, see Terry Lovell, *Consuming Fiction* (London: Verso, 1987), 47–94.

18. "Wonderful Invention," 304. This issue first reached subscribers as early as November 6 and was widely quoted by the press.

19. John Guillory, "Genesis of the Media Concept," *Critical Inquiry* 36 (Winter 2010): 321–362, 322.

20. For example, see Roland Gelatt, *The Fabulous Phonograph, 1877–1977*, 2nd rev. ed. (New York: Macmillan, 1977), 44; and Morton, *Sound Recording*, 18.

21. Edison, "The Phonograph and Its Future," 533.

22. Alfred M. Mayer to Thomas Edison, March 17, 1878, in *The Papers of Thomas A. Edison: The Wizard of Menlo Park 1878* (Baltimore: Johns Hopkins University Press, 1998), 4:190. Underlined in original.

23. Friedrich A. Kittler discusses the relationship between disability and sound recording more broadly in *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Palo Alto, Calif.: Stanford University Press, 1999), 22.

24. Mary Cadwalader Jones, "The Education of the Blind," *Scribner's Magazine* 12 (September 1892): 373–387, 375.

25. Vanessa Warne, "'So That the Sense of Touch May Supply the Want of Sight': Blind Reading and Nineteenth-Century British Print Culture," in *Media, Technology, and Literature in the Nineteenth Century: Image, Sound, Touch*, ed. Colette Colligan and Margaret Linley (Aldershot: Ashgate, 2011), 43–64.

26. See the accounts of the "Battle of the Types" in John Oliphant, "'Touching the Light': The Invention of Literacy for the Blind," *Paedagogica Historica* 44, nos. 1–2 (February–April 2008): 67–82; and Mary Wilson Carpenter, *Health, Medicine, and Society in Victorian England* (Santa Barbara, Calif.: Praeger, 2010), 128–148.

27. For example, the online publisher Silksoundbooks attributes the concept of the audiobook to the Royal National Institute of Blind People (RNIB). www.silksoundbooks.com/history-of-audiobooks.html.

28. Lisa Gitelman, *Scripts, Grooves, and Writing Machines: Representing Technology in the Edison Era* (Palo Alto, Calif.: Stanford University Press, 1999), 13.

29. Scott D. N. Cook, "Technological Revolutions and the Gutenberg Myth," in *Internet Dreams: Archetypes, Myths, and Metaphors*, ed. Mark Stefik (Cambridge, Mass.: MIT Press, 1996), 67–82.

30. "That Wonderful Edison," *New York World*, March 29, 1878, TAED MBSB10463.

31. "A Marvellous Discovery," *New York Sun*, February 22, 1878, TAED MBSB10378.

32. "Uses of the Phonograph," *Boston Daily Advertiser*, April 15, 1878, 1.

33. Leah Price describes the use of women as "human audiobooks" in *How To Do Things with Books in Victorian Britain (Princeton: Princeton University Press, 2012),* 214.

34. Thomas Edison, "The Perfected Phonograph," *North American Review* 379 (June 1888): 641–650, 646.

35. On Dickens's reading tours, see Philip Collins, ed., *Charles Dickens: The Public Readings* (Oxford: Clarendon Press, 1975).

36. The phrase is used in Malcolm Andrews, *Charles Dickens and His Performing Selves: Dickens and the Public Readings* (Oxford: Oxford University Press, 2006), viii.

37. On the history of copyright laws in the nineteenth century, see Meredith L. McGill, "Copyright," in *A History of the Book in America*, vol. 3, *The Industrial Book 1840–1880*, ed. Scott E. Casper et al. (Chapel Hill: University of North Carolina Press, 2007), 158–178.

38. *Bangor Daily Whig & Courier*, April 10, 1878, 1.

39. "Possibilities of the Phonograph," *Indianapolis News*, March 30, 1878, 4. Reprinted from the *Cincinnati Commercial*, http://www.phonozoic.net/no038.htm.

40. "Mr. Edison's Inventions," *Chicago Tribune*, April 3, 1878, 2.

41. Ibid.

42. Walter L. Welch and Leah Brodbeck Stenzel Burt, *From Tinfoil to Stereo: The Acoustic Years of the Recording Industry 1877–1929* (Gainesville: University Press of Florida, 1994), 78.

43. On the growing book trade in America and Britain, see Carl F. Kaestle and Janice A. Radway, eds., *Print in Motion: The Expansion of Publishing and Reading in the United States, 1880–1940* (Chapel Hill: University of North Carolina Press in association with the American Antiquarian Society, 2009); and Alexis Weedon, *Victorian Publishing: The Economics of Book Production for a Mass Market, 1836–1916* (Aldershot: Ashgate, 2003).

44. "The Phonograph," *The Public,* May 2, 1878, TAED SM029045a.

45. Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge, Mass.: MIT Press, 1994), 8.

46. Quoted in *Ariel* (University of Minnesota) 7, no. 1 (October 9, 1883): 12.

47. The idea of sleep learning, or hypnopaedia, persists in popular culture despite research confirming that learning does not take place during sleep. See Eric Eich, "Learning during Sleep," in *Sleep and Cognition*, ed. Richard R. Bootzin, John F. Kihlstrom, and Daniel L. Schacter (Washington, D.C.: American Psychological Association, 1990), 88–108.

48. *Ariel* (University of Minnesota) 7, no. 1 (October 9, 1883): 12.

49. R. Balmer, "Whispering Machines," *Nineteenth Century* 17 (March 1885), 496–499, 497.

50. "A Whispering Machine," *Cassell's Family Magazine* (1885), 383.

51. Andre Millard, *America on Record: A History of Recorded Sound* (Cambridge: Cambridge University Press, 1995), 4.

52. See Carl F. Kaestle et al., eds., *Literacy in the United States: Readers and Reading since 1880* (New Haven, Conn.: Yale University Press, 1991); and Patrick Brantlinger, *The Reading Lesson: The Threat of Mass Literacy in Nineteenth-Century British Fiction* (Bloomington: Indiana University Press, 1998).

53. Balmer, "Whispering Machines," 497.

54. "The Phonograph," *The Phonographic Magazine* 2, no. 2 (February 1, 1888): 30–31, 31. Reprinted from *New York World*.

55. On uses of the phonograph by the working classes and other marginalized groups, see William Howland Kenney, *Recorded Music in American Life: The Phonograph and Popular Memory, 1890–1945* (New York: Oxford University Press, 1999).

56. See Lisa Gitelman's account of the phonograph as a language machine in *Scripts, Grooves, and Writing Machines*, 62–96.

57. Kevin J. Hayes, "The Public Library in Utopia," *Libraries & the Cultural Record* 45, no. 3 (2010): 333–349.

58. Adam Seth Lowenstein discusses the absence of the phonograph from Bellamy's original utopian vision in "What *Looking Backward* Doesn't See: Utopian Discourse and the Mass Media," *Utopian Studies* 22, no. 1 (2011): 143–166.

59. Cyrano de Bergerac, *Voyages to the Moon and the Sun*, trans. Richard Aldington (London: Folio Society, 1991), 79–80. Roger Chartier examines the speaking book's relation to print culture in *Inscription and Erasure: Literature and Written Culture from the Eleventh to the Eighteenth Century*, trans. Arthur Goldhammer (Philadelphia: University of Pennsylvania Press, 2007), 63–82.

60. *Western Electrician*, October 26, 1889, 220.

61. On the place of technology in Bellamy's thought, see Howard P. Segal, "Bellamy and Technology: Reconciling Centralization and Decentralization," in *Looking Backward, 1988–1888: Essays on Edward Bellamy*, ed. Daphne Patai (Amherst: University of Massachusetts Press, 1988), 91–105. See also Howard P. Segal, *Technological Utopianism in American Culture* (Chicago: University of Chicago Press, 1985).

62. Edward Bellamy, "With the Eyes Shut," *Harper's New Monthly Magazine* 79 (October 1889): 736–745, 738. Republished in *The Blindman's World and Other Stories* (Boston: Houghton, Mifflin, 1898), 335–365.

63. The essays in Matthew Rubery, ed., *Audiobooks, Literature, and Sound Studies* (New York: Routledge, 2011), provide detailed accounts of the reception given to spoken word recordings in the twentieth century.

64. Bellamy, "With the Eyes Shut," 736, 737, 738.

65. Sven Birkerts, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age* (New York: Fawcett Columbine, 1994), 141–150, 143.

66. Andreas Huyssen, *After the Great Divide: Modernism, Mass Culture, Postmodernism* (Bloomington: Indiana University Press, 1986), 44–62.

67. Three key accounts of the physiology of reading are Nicholas Dames, *The Physiology of the Novel: Reading, Neural Science, and the Form of Victorian Fiction* (Oxford: Oxford University Press, 2007); Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998), 380–443; and Paul Saenger, *Space between Words: The Origins of Silent Reading* (Palo Alto, Calif.: Stanford University Press, 1997), 1–6.

68. On difficulty as the core aesthetic of modernist writers, see Leonard Diepeveen, *The Difficulties of Modernism* (New York: Routledge, 2003); and Vicki Mahaffey, *Modernist Literature: Challenging Fictions* (Malden, Mass.: Blackwell, 2007).

69. "A Phonographic Era," *Electrical World* 14, no. 15 (October 12, 1889), 243.

70. Morton Luce, *Tennyson* (London: J. M. Dent, 1901), 19. The phrase is originally used in Robert James Mann, *Tennyson's "Maud" Vindicated: An Explanatory Essay* (London: Jarrold & Sons, 1856), 13.

71. Tennyson's poem already had a reputation as a performance piece. In 1873 the English art critic Philip Gilbert Hamerton had used the poem to support his argument that nonnative speakers could never truly master another nation's verse. Hamerton gives the example of a learned Frenchman who reads "Claribel" aloud by pronouncing "Her song the lintwhite swelleth" as "Ere songg ze lintveet svelless." Philip Gilbert Hamerton, *The Intellectual Life* (New York: John B. Alden, 1884), 123–124. The vignette circulated widely among periodicals

over the next two decades before being taken up again in the 1900s by the esteemed literary critic Sir Arthur Quiller-Couch, this time with a cod-German accent in place of a French one. Arthur Quiller-Couch, *Studies in Literature* (Cambridge: Cambridge University Press, 1918), 309–311.

72. Bennett Maxwell, "The Steytler Recordings of Alfred, Lord Tennyson: A History," *Tennyson Research Bulletin* 3 (1980): 150–157.

73. Willa Z. Silverman, "Books Worth of Our Era? Octave Uzanne, Technology, and the Luxury Book in *Fin-de-Siècle* France," *Book History* 7 (2004): 239–284.

74. See Robert Hendrick, "Albert Robida's Imperfect Future," *History Today* 48, no. 7 (July 1998): 27–32.

75. Octave Uzanne and Albert Robida, "The End of Books," *Scribner's Magazine* 16 (August 1894): 221–231, 224 (hereafter cited parenthetically in text by page number). The French version appeared as "La Fin des livres" in Octave Uzanne and Albert Robida, *Contes pour les bibliophiles* (Paris: Quantin, 1895), 125–145.

76. On the concept of media adaptation, see Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, Mass.: MIT Press, 1999).

77. "The Phonograph," *Times*, January 17, 1878, 4. Mark Poster elaborates on how authorship is affected by the transition from print to new media in *What's the Matter with the Internet?* (Minneapolis: University of Minneapolis Press, 2001), 43.

78. de Bergerac, *Voyages to the Moon and the Sun*, 13.

79. Bellamy, "With the Eyes Shut," 738; Uzanne and Robida, "End of Books," 226.

80. Ray Phillips, *Edison's Kinetoscope and Its Films: A History to 1896* (Westport, Conn.: Greenwood Press, 1997), 3–27. The role of Edison's Kinetoscope in the development of cinema is documented in Stephen Herbert, ed., *A History of Pre-Cinema* (London: Routledge, 2000), 3:132–133.

81. *Bookworm* 83 (October 1894): 351. Quoted in Elizabeth Eisenstein, *Divine Art, Infernal Machine: The Reception of Printing in the West from First Impressions to the Sense of an Ending* (Philadelphia: University of Pennsylvania Press, 2011), 227.

82. Octave Uzanne, *La Nouvelle Bibliopolis: voyage d'un novateur au pays des néo-iconobibliomanes* (Paris: Floury, 1897), 41. Quoted in Silverman, "Books Worth of Our Era?" 276.

83. Recent examples include Jeff Gomez, *Print Is Dead: Books in Our Digital Age* (London: Macmillan, 2008); and, by implication, Jean-Claude Carrière and Umberto Eco, *This Is Not the End of the Book*, trans. Polly McLean (London: Harvill Secker, 2011).

84. On the long tradition of premature obituaries for the book, see Priscilla Coit Murphy, "Books Are Dead, Long Live Books," in *Rethinking Media Change: The Aesthetics of Transition*, ed. David Thorburn and Henry Jenkins (Cambridge, Mass.: MIT Press, 2003), 81–93. Paul Duguid examines the supersession of the book by new media in "Material Matters: The Past and Futurology of the Book," in *The Future of the Book*, ed. Geoffrey Nunberg (Berkeley: University of California Press, 1996), 63–102.

85. Balmer, "Whispering Machines," 498.

86. Ibid.

87. Ibid., 499.

88. "Occasional Notes," *Pall Mall Gazette*, February 28, 1885, 3.

89. James Raven issues a warning against narratives that associate print culture with the inevitability of progress in *The Business of Books: Booksellers and the English Book Trade 1450–1850* (New Haven, Conn.: Yale University Press, 2007), 376.